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Attorney Docket No.: DRE-0067
Inventors: Laurencin et al.
Serial No.: 10/052,121
Filing Date: January 17, 2002
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This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1: (currently amended) A scaffold for tissue engineering consisting of biocompatible, biodegradable polymer-based hollow microcarriers with a density equal to or less than water bonded together by heating at ~~several degrees a~~ sintering temperature that is above the glass transition temperature of the polymer and below the melting temperature of the polymer into three dimensional scaffold with a density equal to or less than water and a fully interconnected pore network, said scaffold exhibiting cell attachment and retaining of cell phenotype upon in vitro culturing with cells in a rotating bioreactor.

Claim 2: (original) The scaffold of claim 1 which is seeded with cells via culturing *in vitro* in a rotating bioreactor.

Claim 3: (previously presented) The scaffold of claim 2 wherein the seed cells comprise osteoblast cells, endocrine cells, fibroblasts, endothelial cells, genitourinary cells, lymphatic vessel cells, pancreatic islet cells, hepatocytes, muscle cells, intestinal cells, kidney cells, blood vessel cells, thyroid cells, parathyroid cells, cells of the adrenal-hypothalamic pituitary axis, bile duct cells, ovarian or testicular cells, salivary secretory cells, renal cells, chondrocytes, epithelial cells, nerve cells or progenitor cells.

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Claim 4: (canceled)

Claim 5: (original) A method for regenerating a selected tissue comprising seeding the scaffold of claim 1 with cells which generate the selected tissue and culturing the scaffold and seeded cells in a rotating bioreactor.

Claim 6: (previously presented) The method of claim 5 wherein the seed cells comprise osteoblast cells, endocrine cells, fibroblasts, endothelial cells, genitourinary cells, lymphatic vessel cells, pancreatic islet cells, hepatocytes, muscle cells, intestinal cells, kidney cells, blood vessel cells, thyroid cells, parathyroid cells, cells of the adrenal-hypothalamic pituitary axis, bile duct cells, ovarian or testicular cells, salivary secretory cells, renal cells, chondrocytes, epithelial cells, nerve cells or progenitor cells.